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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/064,547

07/25/2002

Richard S. Zhang

RD-29,472

1280

6147

7590

08/04/2003

GENERAL ELECTRIC COMPANY
GLOBAL RESEARCH CENTER
PATENT DOCKET RM. 4A59
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EXAMINER

PATEL, RAJNIKANT B

ART UNIT

PAPER NUMBER

2838

DATE MAILED: 08/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/064,547

Applicant(s)

ZHANG ET AL.

Examiner

Rajnikant B Patel

Art Unit

2838

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 25 July 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-31 and 59-67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) 32-58 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 25 July 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-31 and 59-67, drawn to power converter (class 363/40).

Group II, claim(s) 32-58, drawn to integrated magnetic choke (class 336/160).

2. Inventions Group I and Group II are related as combination and subcombination.

Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the magnetic choke is a used in apparatus. The subcombination has separate utility such as transformer and inductor coil.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. A telephone call was made to Ann M. Agosti on July 11, 2003 to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

6. .Restriction to one of the following inventions is required under 35 U.S.C. 121:

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1,22,31 and 59 are rejected under 35 U.S.C. 102(b) as being anticipated by Shirahama et al. (U.S. Patent # 5,446,645) or Change (U.S. Patent # 5,909,367). Shirahama et al. discloses a claimed invention (figure 1,6,8 and 13-14) a cross current control system (Abstract line 5-10) for multiple, parallel coupled power converters, the cross current system comprising: common mode chokes, each coupled to respective power converter; local cross current detectors, each configured for obtaining common mode cross current from a respective output line of a respective power converter; local cross current feedback controllers, each configured for receiving the common mode cross current from a respective local cross current detectors, calculating a resultant cross current and generating a local feedback control signal; and local converter controllers, each configured for using a respective local feedback control signal to drive the respective power converter in accordance with a coordinated switching pattern with respect to the other power converters. Similarly Change's figures 3a-4, discloses all the claimed subject matters (column2, line 40-70 and column 3, line 1-25).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2-21, 23-30 and 60-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shirahama et al. (U.S. Patent # 5,446,645) in combination with Kitahata et al. (U.S. Patent # 6,169,677).

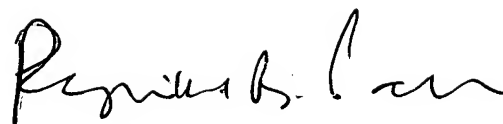
Shirahama et al. discloses claimed invention as explained in the claims 1,22 and 31 above, except the utilization of technique for a magnetic choke and calculating resultant cross current. Kitahata et al. teaches the utilization of similar technique for a magnetic choke and calculating resultant cross current. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Shirahama et al.'s power supply by utilizing the technique taught by Kitahata et al. for the purpose of improve the efficiency of the power supply and reducing noise in the circuit.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rajnikant B Patel whose telephone number is 703-305-7042. The examiner can normally be reached on 6.30-5.00; m-f.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Micheal Sherry can be reached on 703-308-1680. The fax phone numbers for the organization where this application or proceeding is assigned are 872-9318 for regular communications and 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3431

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A handwritten signature in black ink, appearing to read 'Rajnikant B. Patel', with a stylized, cursive script.

Rajnikant B Patel
Primary Examiner
Art Unit 2838

July 19, 2003